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**SUMMARY OF THE CLAIMED SUBJECT MATTER**

Four independent claims (each of claims 1, 10, 11 and 12) are presented. Claims 3 – 9 are all dependent on claim 1 and claims 4 – 9 are further dependent on particular claims between claim 3 and the claim in question.

Each of the four independent claims 1, 10, 11 and 12, as well as dependent claim 3, has been amended to more clearly point out aspects of elements of the claims relating to the important feature of processing first and second streams of packets where each stream has a different transport protocol..

Each of the four independent claims 1, 10, 11 and 12 has the same preamble and the same first three elements as set forth below:

“An adaptive transport decoder, comprising:  
a source of a first stream of packets, each including a payload, and having a first transport protocol;  
a source of a second stream of packets, each including a payload, and having a second transport protocol, wherein said second transport protocol is different than said first transport protocol;  
a protocol decoder, coupled to the first and second packet stream sources, for extracting the respective payloads from the packets from a selected one of the first and second packet stream sources according to said respective different first and second transport protocols;”.

The foregoing elements of each of the four independent claims are at least shown and described in the application as follows.

In Fig. 1 of the application, an adaptive transport decoder has at least two sources of streams of packets 12 and 14 arranged according to respectively different transport protocols (data formats) (page 4, lines 1 – 12). Examples of two different transport protocols are illustrated schematically in Fig. 2 at “A” and “B” of the drawing (page 5, lines 1 – 6). In each of the illustrated transport protocols, each packet includes a “payload” (Fig. 2 and page 5, lines 13 – 16).

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An example of a first packet stream source 12 is described (page 4, lines 6-8) as providing packets having a DSS (Direct Satellite System) transport packet protocol with a payload of 127 bytes in each payload (page 11, line 23). An example of a second packet stream source 14 is described (page 4, lines 11 - 12) as providing packets having a different ATSC (American Television Systems Committoc) transport packet protocol with a payload of 184 bytes in each transport packet (page 11, lines 28 - 29). The different numbers of bytes in the payloads, along with other differences in byte sequences, require that different decoder configurations be provided to decode each different protocol.

Applicant's solution is to provide an adaptive protocol decoder 30 (Fig. 1) coupled to the first and second packet stream sources 10, 12 which selects and extracts the payloads from either one of the packet stream sources (page 4, lines 18 - 20) according the respective different first and second transport protocols.

#### GROUND OF REJECTION

(1) Independent Claims 1, 11 and 12 have been rejected as unpatentable under 35 U.S.C. §103(a) over Eyer et al. (U.S. Patent 5,982,411) and "applicant's admitted prior art" ("AAPA"); and

(2) Claims 3 - 10 have been rejected as unpatentable under 35 U.S.C. §103(a) over Eyer et al. ( 5,982,411), "applicant's admitted prior art" ("AAPA") and further in view of Yu (U.S. Patent 5,410,709).

#### ARGUMENT

#### GENERAL STATEMENT OF PROPER BASIS FOR REJECTIONS UNDER 35 U.S.C. § 103(a)

In a "Notice" dated October 3, 2007, the Director of the USPTO promulgated "Examination Guidelines For Determining Obviousness Under 35 USC 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex, Inc." decided April 30, 2007.

In the "Guidelines", the Director stated:

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"As reiterated by the Supreme Court in KSR, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.* Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (1) Determining the scope and content of the prior art;
- (2) Ascertaining the differences between the claimed invention and the prior art; and
- (3) Resolving the level of ordinary skill in the pertinent art."

The "Guidelines" go on to provide specific (explicit) "rationales" for supporting a legal conclusion of obviousness based on combinations of references as follows (emphasis added):

"The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, [citation omitted] stated that '[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness'.

#### Rationales

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

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(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention." (emphasis added).

The "Guidelines" go on to recognize the continued viability of the TSM rationale (item "G") as follows:

"If the search of the prior art and the resolution of the Graham factual inquiries reveal that an obviousness rejection may be made using the familiar teaching-suggestion-motivation (TSM) rationale, then such a rejection using the TSM rationale can still be made. Although the Supreme Court in KSR cautioned against an overly rigid application of TSM, it also recognized that TSM was one of a number of valid rationales that could be used to determine obviousness".

In *KSR International Co. v. Teleflex, Inc. et al.*, 550 U. S. \_\_\_\_\_ (2007), decided April 30, 2007, (see Section "B", pages 14 – 15 of the published decision), the U. S. Supreme Court discussed this requirement of "teaching, suggestion or motivation" and stated:

"When it first established the requirement of demonstrating a teaching, suggestion or motivation to combine known elements in order to show that the combination is obvious, the Court of Customs and Patent Appeals captured a helpful insight. See *Application of Bergel*, 292 F 2d 955, 956 – 957 (1961). —  
—In the years since the Court of Customs and Patent Appeals set forth the essence of the TSM test, the Court of Appeals no doubt has applied the test in accord with these principles in many cases. There is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis".

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This latter reference to the "Graham analysis" is refers to an analysis set out in *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1 (1966).

It is therefore respectfully submitted that under the published guidelines incorporating the latest Supreme Court decision (the KSR case) the Examiner is required to find all elements of the claims in citable references, to find such references which teach, suggest and/or motivate the person of ordinary skill to combine such elements in the manner set forth in the rejected claims and, most importantly, to provide a "clear articulation of the reason(s) why the claimed invention would have been obvious" (KSR supra) . The KSR opinion requires that 'rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness'. Absent the elements or the showing of a teaching, suggestion or motivation to combine such elements in the manner claimed, and a clear statement and rational analysis of its basis, an obviousness rejection cannot stand.

The § 103(a) Rejections of Claims 1, 11 and 12 Are Traversed

Applicants submit that the Rejection does not make out a *prima facie* case of obviousness with respect to the independent method Claims 1, 11 or 12.

The Examiner has acknowledged (see Latest Office Action, paragraph 4) that:

"Eyer does not disclose different transport protocols for the first and second packet streams".

The Examiner also has acknowledged (see Office Action, paragraph 5) that:

"Eyer does not disclose that the digital processing function (item 265) comprises a processor".

In addition, although the Examiner states :

"Eyer discloses an adaptive transport decoder" (see Office Action, paragraph 3),

that terminology ("adaptive") is never used by Eyer et al. and an "adaptive

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transport decoder" as set forth in all of the claims is not disclosed by Eyer et al.

It is therefore clear (and acknowledged by the Examiner) that Eyer et al. does not disclose or suggest each and every limitation of the independent claims 1, 11 and 12 of this application. Eyer et al. specifically fails to disclose the claim elements above: i. e., "second stream of packets --- -- having a second transport protocol --- wherein said second transport protocol is different than said first transport protocol " and an "adaptive transport decoder" as set forth in all of the claims and a "processor" as set forth in claims 3 - 11.

#### The Disclosure of Eyer et al.

Eyer et al. is concerned principally with a system for facilitating selecting television channels by "grouping channels which originate from a common programming service provider such as a television network" so as "to integrate programming services which are provided via different broadcast signals in different transmission paths" (Eyer et al., Column 1, lines 8 - 12). Because Eyer is interested principally in channel selection rather than image signal processing, he describes image signal processing mostly in general, rather than specific, terms. Eyer describes his system at col. 4, line 23 as follows:

"A method and apparatus are presented for allowing a viewer to easily navigate television programs which are grouped according to a common service provider or other grouping criteria by depressing the "channel up" or "channel down" button on a hand held remote control or the like, thereby allowing a viewer to successively select the grouped channels regardless of the broadcast signal, transmission path and/or broadcast address in which the channel is carried."

Eyer et al. explains his terminology "transmission path" at col. 3, line 31 as follows:

"The transmission paths may include a direct broadcast satellite path, a cable distribution path, a terrestrial broadcast path and a multi-point microwave distribution system path, for example."

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However, Eyer et al. is **silent about different digital transport protocols.**

Eyer et al. refers to a "broadcast address" (col. 3, line 15) as being different for each channel. Eyer et al. states:

"The primary channel programming service is carried in a corresponding "broadcast address" which, for an analog signal may define a frequency spectrum and, for a digital signal, may define a transport stream including PID information as well as a frequency at which the transport stream is provided".

That is simply channel identification information. Eyer et al. further states at col. 3, line 45:

"PID data is provided to distinguish the programming services from one another in a packetized multiplexed digital transport stream".

As stated above, Eyer is silent about different digital transport protocols and repeatedly states that it is "broadcast address information (e. g. frequency and/or PID)" (col. 8, line 36; col. 7, line 66; see also col. 10, lines 29 – 51), that is different for each channel in his system.

Thus, Eyer et al. does not provide any disclosure or suggestion of a significant claim element, (different transport protocols for first and second packet streams and how such different protocols are to be processed), which fact is acknowledged by the Examiner.

To overcome this deficiency in the cited reference, the Examiner attempts to rely upon Applicant's recognition of a problem which was neither disclosed nor solved in the cited reference but which Applicants found to exist at the time the present invention was made. The Examiner characterizes the description in the present application of this problem as "Applicant's admitted prior art" (hereafter, "AAPA"). The Examiner further concludes that the AAPA is somehow combinable with Eyer et al. to modify that disclosure so as to make out a *prima facie* case of obviousness of independent claims 1, 11 and 12.

The AAPA that the Examiner relies upon and uses to modify the

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disclosure of Eyer et al. is as follows:

As stated in the present application, beginning at page 1, line 9:  
"Currently, digital signals carrying programming, such as video/audio/data programming, are supplied to consumers from different providers in respectively different formats, called protocols. For example, direct satellite system (DSS) signals are formatted in a proprietary format owned by DirecTV, and all signals carrying programming supplied via DSS satellites are formatted using that protocol. Similarly, local terrestrial high definition television (HDTV) signals are formatted according to a standard initially proposed by the Advanced Television Standards Committee (ATSC) — and all signals carrying HDTV programming are formatted using that standard protocol.

"Consumers will want to receive digital signals of these and any other protocols through which digital signals carrying programming is carried. Currently, this requires separate decoders, each embodied in a separate enclosure — for each desired protocol. This is expensive, etc.——"

The Examiner has attempted to employ Applicant's recognition of a problem in the prior art relating to the practice of processing different transport protocols by providing different, separate decoders to process different transport protocols (see last paragraph above) as the required teaching, suggestion or motivation (TSM) to modify Eyer.

However, neither the reference nor the general prior art discussed in Applicant's specification suggests any combination or modification of Eyer et al. which addresses the problem, i.e., the practice of providing a different, separate transport packet stream decoder for each transport protocol.

The Examiner's Combination of Eyer et al. and "AAPA"

At page 4, paragraph 4 of the latest Rejection, the Examiner states:

"Eyer does not disclose different transport protocols for the first and second packet streams. Applicant's admitted prior



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art discloses that packets from different streams have different transport protocols (pages 1-2; note: ATSC for terrestrial broadcasts has a different MPEG format than DSS for satellite broadcasts)."

This characterization of Applicant's disclosure is inaccurate.

In Applicant's specification (beginning at page 1, line 9, it is stated:

"Currently, digital signals carrying programming, --- are supplied to consumers from different providers in respectively different formats, called protocols. For example, direct satellite system (DSS) signals are formatted in a proprietary format owned by DirecTV, and all signals carrying programming supplied via DSS satellites are formatted using that protocol. Similarly, local terrestrial high definition television (HDTV) signals are formatted according to a standard initially proposed by the Advanced Television Standards Committee (ATSC) ---- and all signals carrying HDTV programming are formatted using that standard protocol".

On a different issue, (see Applicant's specification, page 2, lines 3 - 6), Applicant stated:

"However, the inventors have also realized that the signals represented by the data in the respective payloads for each of the signal typos, are the same for all of the protocols. That is, for both of the DSS and ATSC protocols, the encoded video and audio signals are MPEG encoded signals. Consequently, once the payloads have been extracted from the received transport packets, the remainder of the signal processing for such signals is the same regardless of the protocol of the received packets (emphasis added)."

There is no "different MPEG format" described.

Based upon this incorrect characterization, the Examiner reaches the conclusion (paragraph 4):

"Therefore, it would be obvious to one skilled in the art at the

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time the invention was made to have different transport protocols in the invention of Eyer in order to provide data as related to the communication medium or preference, as is known in the art (specification, page 1, note: prior-art proprietary transport formats)" (sic).

It is respectfully submitted that this statement ("Therefore, etc.") is not supported, does not follow from what precedes it and cannot be the foundation for an obviousness rejection of the claims.

The mere fact that different transport protocols were used for different signals does not suggest the combinations of elements set forth in the rejected claims directed to an adaptive transport decoder.

The examiner bears the burden of establishing a *prima facie* case of obviousness. To support a conclusion that a claimed combination is obvious, either: (a) the references must expressly or impliedly suggest the claimed combination to one of ordinary skill in the art, or (b) the examiner must present a convincing line of reasoning as to why a person of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985).

The foregoing "analysis" and unsupported conclusion of obviousness do not satisfy such requirements. No *prima facie* case of obviousness has been made out. It is therefore respectfully requested that the rejection of claims 1, 11 and 12 based on Eyer et al. in view of "AAPA" be withdrawn.

#### The § 103(a) Rejections of Claims 3 – 10 Are Traversed

Claims 3 – 10 have been rejected as obvious over Eyer et al. and "AAPA" as applied to claim 1, and further in view of Yu (5,410,709).

In addition to the deficiencies noted above in the Examiner's attempt to show that independent claim 1 (as well as similarly worded claims 11 and 12) are obvious, the rejection of claim 3 lacks a showing of other elements of the claim language.

The rejected dependent claim 3 and independent claim 10 are

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distinguished over the cited art in the same manner as set forth with respect to independent claim 1 above and, in addition, include the following elements:

Claim 3:

"wherein the protocol decoder comprises a processor, responsive to a first control program for processing the packets from the first packet stream source to extract the respective payloads, a second control program for processing the packets from the second packet stream source to extract the respective payloads, and a third control program for switching between the first control program and the second control program".

Claim 10:

"said protocol decoder further comprises a processor responsive to first, second and third control programs, the third control program is responsive to the select signal to switch to the first control program when the first packet stream source is coupled to the protocol decoder and to switch to the second control program when the second packet stream source is coupled to the protocol decoder".

~~The~~ Examiner did not find any "processor" or any "first, second and third control programs, etc" as claimed above in Eyer et al. but relied upon Yu for such a disclosure. That is, the Examiner simply concluded (Rejection, page 5, line 2):

"However, Eyer does not disclose that the digital processing function (item 265) comprises a processor. Yu discloses a processor (fig. 1, item 14) within a device (fig.1). The processor is responsive to control programs (col. 3, lines 40 – 46; col. 4, lines 3 – 5 and 51 – 67)."

Without any particular relationship, teaching, suggestion or motivation between the subject matter of Eyer et al. and that of Yu (besides, perhaps, the fact that each describes electronic signal processing), the Examiner concluded:

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"Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a processor using control programs in the processing function of Eyer in order to flexibly perform processing functions (Yu, col. 4, line 67 through col. 5, line 10; col. 3, lines 55-60)."

There is nothing in the cited text of Eyer et al. to support the Examiner's reference to first, second and third control programs and that text merely refers to the standard processing of a single transport stream containing packetized data for a plurality of channels along with Packet ID (PID) or "channel" information. The PID allows the system to separate the data for a selected channel from the data for other channels that is contained in the single transport stream. This has nothing to do with control programs for extracting payloads from transport streams having different transport protocols and does not anticipate or render obvious the elements of claims 3 and 10 quoted above.

Therefore, the rejection of claims 3 and 10 should be reversed for the foregoing reasons, in addition to those which have been pointed out for independent claim 1.

The § 103(a) Rejections of Dependent Apparatus Claims 4 – 9 Are Traversed

Dependent apparatus claims 4 – 9, which include all of the limitations of independent claim 1 and dependent claim 3, have been rejected as obvious with respect to Eyer et al. and "AAPA", and further, in view of Yu (U.S. 5410709).

With respect to apparatus claims 4 – 9, it has been demonstrated above that there is no valid basis for rejecting independent claim 1 or dependent claim 3 as being obvious in view of Eyer et al. plus "AAPA"

The Examiner acknowledges that the principal reference "Eyer et al. does not disclose that the packets have a first and second transport protocol" as required by all of the appealed claims, including claims 4 – 9 which depend from claim 1.

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As pointed out above, Eyer et al. also does not disclose processing of packets having a first and a second transport protocol and, furthermore, it has been demonstrated that there is no basis for combining Eyer et al. with any "AAPA", even when taking into consideration Applicant's discussion of the ~~ATSC~~ ATSC and DSS transport protocols. In addition, it has been shown that the added limitations of dependent claim 3, from which claims 4 – 9 are dependent, is neither shown nor suggested by Eyer et al. For these reasons alone, the rejection of claims 4 – 9 should be withdrawn.

Yu (col. 1, line 17) describes interrupt processing within a "hybrid" general purpose digital computing system where a number of central processing units operate under the control of different operating systems. The CPU's are capable of accessing all of the resources within the entire system. The Examiner relies on col. 4, line 67 through col. 5, line 15 to indicate what Yu discloses. That text reads as follows:

"The dispatching function module 40-4 contains routines for dispatching interrupts received from controller channel control programs loaded into an XCP interrupt hardware register 14-1 included within XCP central processing unit 14. More specifically, the interrupt received by the XCP central processing unit 14 causes the referencing of one of 16 interrupt vectors from memory. The interrupt vector containing the channel number information is loaded into the register 14-1. The module 40-4 responds to the interrupt, obtains the matching channel number and invokes the corresponding driver interrupt handler routine. Both modules 40-2 and 40-4 operatively couple to the interrupt control table 42. The function processing module 40-2 accesses the table 42 to store and clear entries while module 40-4 accesses the table 42 in dispatching interrupts to the appropriate driver handler routines."

It is submitted that there is nothing in either Yu or Eyer et al. which would lead anyone to combine any teachings of those two references. It is submitted that the Examiner's suggested incomplete combination has

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only been arrived at as a result of Applicant's teachings and inappropriate use of hindsight.

No Prima Facie Case of Obviousness Exists Based on the Combination of the Cited Art

The primary reference, Eyer et al., has been acknowledged by the Examiner as lacking elements of independent Claims 1, 11 and 12.

The Examiner has attempted to rely on the secondary references, "AAPA" and Yu to supply missing claim elements. However, the Examiner is not free to create such a combination in the absence of either motivation in the applied references to do so or a reasonable expectation of success. In view of the substantial lack of relevant teachings and disclosure in the Eyer et al. patent as pointed out above, one skilled in the art would not be aware that there is any reason or basis to consider Eyer et al., the AAPA and Yu together. Without such an awareness, the skilled artisan would not be motivated to modify the teachings of these references.

It should be apparent that Eyer et al. is substantially different from the invention set forth in rejected claims of this application and Eyer et al. leaves gaps which the Examiner has acknowledged.

Neither of the disclosures of the Yu or Eyer et al. patents acknowledges that there is any problem present in their systems which could be solved by any such combination.

The Examiner has attempted to combine information relating to a problem solved by Applicant's claimed invention (the AAPA) to modify and/or combine elements of Eyer et al. and Yu to produce a different combination of elements which is neither suggested nor disclosed by those references. No motivation or suggestion has been demonstrated for modifying these references to arrive at what is presently claimed.

With respect to the Examiner's attempt to combine Eyer et al. and AAPA with Yu, It is submitted that one skilled in the art would not be motivated to combine these teachings for any useful purpose. It is respectfully submitted that the suggested combination can be motivated, if at all, solely by hindsight reasoning guided by the applicant's own disclosure — reasoning that is expressly forbidden during the examination of a claim under

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§ 103(a). In re Gorman, 18 U.S.P.Q.2d 1885, 1888 (Fed. Cir. 1991); In re Fritch, 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992). Accordingly, it is respectfully requested that the rejection of each of claims 1 and 3 – 12 be withdrawn.

Accordingly, Applicant requests that the Examiner's rejection be withdrawn as to Claims 1 and 3 – 12 and that the application should be held to be in condition for allowance.

Respectfully submitted,

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